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AUTHOR Feldmesser, Robert A.
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ABSTRACT

There has been a great deal of controversy about the value of grades and much of it has been negative. Yet grades perform several valuable functions. They provide the student with a sense of how good his general performance has been and can help him decide whether or not to continue in certain subject areas or, in the larger context, whether to continue with his education. Where grading is required, the instructor is under some pressure to develop reasonable criteria, and the reporting requirement restrains the instructor from making evaluations that merely reflect his ideological or punitive inclinations - he could be called upon to justify his grades. Since grades are important, the student is forced to take the evaluation of his work seriously. In this respect grades can be motivators to achievement. Some of the criticism of grades is unwarranted: i.e., that they rely on extrinsic rewards, that they do not predict later success, that they foster competitive attitudes, and that low grades discourage students from further study in the subject. The excessive anxiety that grades may arouse can be countered by limitations on the uses made of the grade record. The issue over whether grades are valid measures of academic performance can be dealt with by giving faculty members training in making educational evaluations. (AF)

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THE POSITIVE FUNCTIONS OF GRADES*

Robert A. Feldmesser
Research Sociologist, Educational Testing Service

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There seems to be general agreement among those who have commented on the subject that, at least at the college level, it is educationally beneficial for a student to receive some sort of evaluation of his work--that is, some type of judgment about the quality of his academic performance which he can use as feedback to guide his future academic behavior. It is quite proper to regard a grade as one form of evaluation--specifically, as that form which has been so highly condensed or abstracted that it can be expressed as a number, or as a letter that can be converted into a number.¹ However, all forms of evaluation may not be equally beneficial, and some may not be beneficial at all. The controversy about grades, therefore, resolves into the issue of the kind of evaluation they are. Do grades serve any evaluative function that cannot be served, or served better, by some other form of evaluation?

My answer is that they do. I shall contend that grades provide unique and useful information to the student (their "first-order" function) and that they stimulate the making of other kinds of evaluation

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¹It may be noted that this definition of a grade could also be applied to a score on a test given for research purposes, though we would not ordinarily call the latter a "grade." Both the reason for the similarity and the nature of the differences will be pointed out below.

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and increase their effectiveness when they are made (their "second-order" functions). I want to emphasize that, in order to meet the opponents of grades on their own ground, I shall be speaking exclusively of the student as the immediate beneficiary of educational practices. Grades will be justified in terms of their usefulness in enhancing learning--not in terms of their usefulness to administrators, graduate schools, or employers.

The first-order function

The kind of evaluation most widely favored, and often seen as excluding grades, is one which is highly detailed and specific, which gives the student a maximum of information about his performance along each of the relevant dimensions of a course. This is the sort of feedback, it is argued, that helps him to identify his strengths and weaknesses so that he can most wisely allocate his resources of time and energy in his future academic work. I am quite willing to accept the argument that these "formative evaluations" are indeed valuable.

There is, nevertheless, also an important role to be played by the "summative evaluation" we call a grade. A grade ought to be viewed as an effort to put back together, to synthesize, the separate judgments that have been made about a student's work. It gives the student some sense of how good his performance has been, on the whole. To a student in a biology course, for example, it is not enough to know that his lab work was weak while his grasp of abstract concepts was strong, that he was high on understanding of cell structure but low on understanding of

ecological relationships and middling on understanding of reproductive systems. He will also want to know what it all adds up to--whether, all things considered, he did "well" or "poorly." The grade thus satisfies a natural kind of curiosity,² but--while that seems like a virtue in itself--it does more. It helps a student decide whether, taking one thing with another, biology is a field in which further inputs of his resources are likely to be productive for him, or whether he ought to consider switching to some other field. In other words, if it is useful to him to have judgments about one aspect of his course work as distinguished from other aspects, it is also useful to him to have judgments about one course, "wholistically" considered, as distinguished from other courses.

At the risk of being even more out of fashion, let me suggest that this same logic can, and I believe should, be applied to the infamous grade-point average. It strikes me as being quite helpful for a student to know how well he is doing in higher education generally, all courses considered, so that he can make a more informed decision about whether further study is the right thing for him, and, if it is, what sorts of institutions would be most suitable for him. In the absence of such information, he may waste his time by pursuing his studies or waste his talents by not pursuing his studies. And I trust I need not belabor the

²See the thoughtful remarks on this by Melvin M. Tumin, "Evaluation of the Effectiveness of Educational Systems," Interchange (in press).

point that the grade is the only form of evaluation that can be used to calculate a grade-point average.

Educational researchers above all ought to be able to appreciate this function of grades. As researchers, we often find it useful to know not merely how a subject has responded to a particular item, or what his score is on several subscales, but also what his total score is on the scale as a whole. Each of these kinds of information is useful for different purposes and none of them can be substituted for another. Why can we not say the same about the student? Why shouldn't he, too, find information on different levels of generality or abstraction, ranging from an instructor's comment on his answer to an exam question to a course grade and a grade-point average, equally and uniquely useful but for different purposes?³

The second-order functions

The other functions of grades I have called "second-order" because they arise out of another functional need, the need for reporting evaluations to a central agency of authority within the educational institution. If such a central agency is to receive evaluations on all students in all courses (or even most of them) during the entire time they are in college, it is economically necessary, or certainly desirable, that the evaluations

³Hence the similarity between grades and test scores. To be a bit malicious, I might add that researchers often put more credence in a total scale score than in the responses to any particular item or group of items, on the assumption that various sorts of errors of response or interpretation on the separate items tend to be canceled out in the total score. By the same reasoning, the GPA is actually superior, as a form of evaluation, to any single grade.

be highly condensed--preferably expressed in a single symbol--simply so that the central agency does not have to devote an inordinate amount of resources to record-keeping that could be better devoted to more directly educational uses. Which is to say that if evaluations are to be reported, they must take the form of grades. Thus, if I can establish the functional necessity of reporting, I also establish by implication the need for grades.

Why, then, is reporting a functional necessity? In particular, why is it important to the student's learning, since that is the criterion I have adopted? I offer two basic arguments.

The first has been, to my mind, rather astonishingly neglected in the discussions of grading. I mentioned at the outset the general agreement, in which I share, that a student benefits from receiving some sort of evaluation of his performance. But a question that no one seems to have asked is: Why should an instructor bother to furnish an evaluation to his students? It is not an idle question. Given the many pressures that divert a faculty member from concern with his teaching duties, and given the frequently observed trend toward such diversion (and given also the difficulties of making evaluations), it is highly probable that many instructors would be happy to abandon the evaluative role altogether. At two universities where pass-fail grading was instituted under conditions which allowed instructors to know which of their students were receiving only pass-fail grades, students in that position did indeed complain that, in the words of one observer, "instructors often took fewer pains in

evaluating their submitted work than they did with those taking the course for a letter grade."⁴ That, I suspect, is but a hint of what could well happen if instructors did not have to report any grades at all. In short, it becomes apparent that the reporting requirement exercises a coercive force over the instructor on behalf of his students. At the very least, it compels him to make some minimum of evaluation--i.e., the minimum represented by the grade itself.

But in most cases, it probably prods him to go beyond the bare minimum. Since he does have to submit a grade, the ordinary instructor probably feels an obligation to develop some reasonable basis for it, if only so that he can defend it if questioned about it. Hence, he will set up more or less detailed evaluative procedures; and if he's going to do that, it takes very little extra effort to inform his students about the results as he goes along, which also helps avoid a situation in which students could claim that their grade took them unfairly by surprise or that they could have taken corrective action if they had been informed

⁴Mathew R. Sgan, "Letter Grade Achievement in Pass-Fail Courses," Journal of Higher Education, 41 (November 1970), 639. At this institution (Brandeis University), the regulations were subsequently changed, at the students' request, so that instructors would not be informed about which of their students were taking their courses on a pass-fail basis (ibid., p.638). The other institution is the University of California at Santa Cruz, where most courses are offered only on a pass-fail basis, but instructors are also supposed to provide detailed evaluations. In response to a questionnaire, several students said they "were very unhappy with their instructors for not having completed evaluations for their files," and one is quoted as saying, "With a few exceptions, they don't give a goddamn." Memo to the Santa Cruz faculty from the Chancellor's office, January 6, 1970, p. [4].

earlier.⁵ Moreover, the reporting requirement has a kind of quality-control function, analagous to the role played by the requirement that trials be held in public: it restrains the instructor from making evaluations that merely reflect his ideological or punitive inclinations, lest he be called upon to justify his grades. In the absence of this requirement, some instructors would probably get pretty ruthless about "maintaining academic standards."⁶

If we ask why an instructor should bother to make evaluations of his students, we must also ask why students should pay any attention to an evaluation that has been made. The usual answer is that the evaluation helps the student to learn, and the student is in college for the sake of learning, so naturally he will take evaluations of his work seriously. I am not convinced of the soundness of that answer; I would not be the first to express the suspicion that many students are in college not to learn but to get a degree. And students, like faculty, are presented with many distractions from what is supposed to be their central task.

Even aside from that, however, many students--and their number seems, if anything, to be increasing--deliberately decide, on what seem to them to be rational grounds, that the subject matter of a particular course, or particular parts of a course, are irrelevant to their needs and therefore

⁵ Many instructors are, to put it gently, dilatory about this even now; one can imagine the abuses that would occur if there were no reporting requirement at all.

⁶ Cf. Burton R. Clark, The Distinctive College: Antioch, Reed, Swarthmore (Aldine, 1970), p. 131.

ought not to be learned. We might say that that's their business; if they choose not to learn, they will and should bear the consequences of their decision. I think that's a cop-out; it is shirking our educational duty, if not undermining our educational pretensions. The student, after all, is young, and his very presence in a course indicates that he knows relatively little about the field. Consequently, he doesn't necessarily know what will be relevant to his needs over the long run; and in any event, his needs and his interests change. His teachers claim to have more foresight than he does, particularly with respect to what will prove relevant in their fields (if they are unwilling to make that claim, they shouldn't be his teachers). Thus, they are entitled--I would say obliged--to exert some pressure on the student to get him to learn material whose importance he is not yet in a position to perceive. One effective and appropriate way of accomplishing that is to make it in the student's immediate self-interest to take his instructors' evaluations seriously, and that can be accomplished, in turn, by using those evaluations as the basis for short-run important decisions about the student--for example, decisions about his further study or about his employment. If, finally, that is to be done, the evaluations must be reported to some central agency which has the authority to make those decisions or to transmit the information to others who can. And this reporting function, as I have argued above, demands grades to carry it out.⁷

⁷The knowledge that important decisions are going to be based on a student's grades is another force impelling instructors, too, to take more care with grades than they might otherwise.

All of this is, of course, but a spelling out of the familiar "motivational" function of grades,⁸ but something more is involved, too. Students, like other people, interpret the significance of communications in part by the significance attributed to them by others. If no one else cared what evaluations had been made of his work, why should the student care? If no one else based any important decisions on those evaluations, wouldn't the message to the student be that the evaluations were, in fact, not important? Why, then, should he allow them to influence his academic behavior? It is therefore apparent that grades give impetus to the feedback function of other evaluations.⁹

⁸ It is sometimes objected that grades cannot affect a student's behavior during a course because they are typically not reported until the course is over, but the objection is invalid. Students are human beings with the power to anticipate the consequences of their actions, at least over a period of time as short as a semester, and they will shape their actions accordingly. For some interesting general comments from students in an experimental course about their own inability to "motivate themselves" in the absence of grades, see William R. Torbert and J. Richard Hackman, "Taking the Fun Out of Outfoxing the System," in Philip Runkel, Roger Harrison, and Margaret Runkel, eds., The Changing College Classroom (Jossey-Bass, 1969), pp. 167-176. Further empirical evidence is presented in Robert A. Feldmesser, The Option: Analysis of an Educational Innovation (Dartmouth College, 1969), and in other studies of pass-fail grading.

⁹ We can now see how a grade differs from a score on a research instrument. The latter is not reported to any agency which has authority over the student, and it is not used to make any important decisions about him. Neither of these is essential to the definition of a grade (it is quite conceivable that instructors could report their condensed and symbolized evaluations directly to the student alone, and that no further use would be made of them); rather, they grow out of the functions of a grading system, which are different from the functions of research. Externally designed tests could be used as the basis for grades, in which case the distinction would virtually disappear.

I want to make two qualifications on what I have been saying. First, there is no reason to reject a student's perceptions of his own needs and interests completely; surely he knows some things about himself that his instructors do not and could not know. A proper grading system will take this into account--for example, by permitting students to assign different weights to their grades in the calculation of their GPA.¹⁰ Second, allowing a student's grades to be used in too many ways, or in ways that are excessively threatening, would impair, rather than enhance, their motivational function. I shall have more to say about this later.

The criticisms of grades

I am not so much of a Pollyanna as to conclude, from the preceding arguments, that all is well with grading. Complacency is definitely not called for. A great many criticisms of grades have been and are being made,¹¹ and it is a plausible hypothesis that their dysfunctional consequences outweigh their functional ones. I believe that hypothesis is false. Many of the criticisms of grades are just plain unwarranted--that is, they suffer from a logical defect, or perhaps it would be more modest to say that at least I don't understand them. Others are more properly directed to the misuse of grades than to grades per se, or to

¹⁰For details, see Feldmesser, op. cit., pp. 145-148.

¹¹One of the more hysterical recent examples is Sidney B. Simon, "Grades Must Go," School Review, 78 (May 1970), 397-402, in which grades are blamed not only for student suicides, but also for, among other things, selfishness, cowardice, and housing segregation.

evaluation generally rather than to grades specifically. A few do refer to technical deficiencies of grades themselves. Most of these criticisms can be met by institutional changes.

A great many people object to grades because they are "extrinsic" rather than "intrinsic" rewards. In the minds of these people, some sort of moral stigma seems to be attached to extrinsic rewards. I confess that I fail to perceive the grounds for their revulsion. Perhaps it is true that something is amiss with the person who behaves exclusively in response to extrinsic rewards; we are apt to call him an unscrupulous opportunist. But there's something just as unpleasant about the person who responds exclusively to intrinsic rewards; we would call him ritualistic, or maybe fanatic. It seems to me that commendable character, as well as healthy personality, consists of a balance of responses to both kinds of rewards; and in such a balance, grades would have a legitimate place. I know of no evidence showing that learning cannot take place under conditions of extrinsic reward; and I would add that, except for the satisfactions connected with a few primitive biological urges, all intrinsic rewards begin as extrinsic ones.¹² But what is crucial, in the last analysis, is not whether rewards are intrinsic or extrinsic, but what kinds of behavior they induce--and in the present case, that is a matter of the validity of grades as measures of academic performance, which we shall return to later.

¹²See also the remarks by Robert L. Ebel, Measuring Educational Achievement (Prentice-Hall, 1965), p. 400.

It is also said that there must be something wrong with grades because they are not very good predictors of "success" in later life. But, as Donald Hoyt has suggested, that is not necessarily a condemnation. Grades ought to measure what has been learned; "success" is at least in large part a result of what has been done with the learning.¹³ Indeed, it is not altogether clear that knowledge and understanding are necessary ingredients of success in our society. And if they are, I might go so far as to argue that, if the employment of cognitive learnings were inhibited by certain affective learnings--for example, the development of sensitivity to the needs and rights of others--and if grades were valid measures of both, their lack of correlation with success might be cause for gratification.

A third criticism which I shall boldly dismiss as unwarranted is that grades "foster competitive attitudes." I shall refrain from saying that the statement is simply false; here again, the empirical evidence is not clear (and by the same token, the critics ought to refrain from insisting it is true). What I wish to say, rather, is first, that it applies to grades only insofar as it applies to evaluations of human performance generally, because a comparison with the performance of other humans is usually the most meaningful frame of reference, if not the only one available, for all such evaluations. Second, there are grading systems which can minimize the "dog-eat-dog" kind of competitiveness,

¹³ Donald P. Hoyt, "The Relationship between College Grades and Adult Achievement, A Review of the Literature" (ACT Research Reports No. 7, 1965), p. 46.

though they cannot be described within the scope of this paper. Third, and most pertinent, a certain kind of competitive perspective is really a very desirable thing for the individual to have. In considering his future career, a student ought to take account of his comparative advantages vis-à-vis others who he can expect will be doing the same things he might do, so that he can better determine where he can make his most satisfying contribution. Thus, he might want to choose a field in which he thinks other people will work less effectively than he--which will be, if everything is working right, a field in which he has received high grades. At the very least, he deserves to have the information about which fields those would probably be. Please note that this aspect of grades--which might even be thought of as another one of their functions--has nothing to do with inducing men to cut each other's throats, or even with preparing them to live in a competitive world. It "fosters a competitive attitude" only by spurring students into the realization that the potential uses of resources, including the talents and energies of an individual, compete with each other in the sense that resources put to one use cannot be put to another.

The final criticism in the "unwarranted" category is that a low grade discourages a student from further study of the subject. But isn't that exactly what a low grade should do? (I am speaking here about a single low grade; the problem of many low grades will be taken up shortly.) If, despite our efforts to get him to learn, a student is performing poorly in, say, math, he should be discouraged from taking further courses in it; that is an aid to his education, not a detriment,

for he might learn a great deal more in art history or Spanish literature. In his own interest, letting him know that he is performing poorly is preferable to promoting an illusion about himself.

But a student can be given a negative evaluation in a course without having to broadcast it to the world--that is, without having it entered on to his transcript and incorporated into his GPA. This, it is complained, is when the damage is done. Since the GPA is important to students, even a slight decline in it is said to arouse inordinate anxiety,¹⁴ and students will go to great lengths to avoid it--for example, by confining themselves as far as possible to courses in which they are confident they can earn high grades.¹⁵ That would be an undesirable by-product, but it implies a misuse of grades, and so brings me to my next category.

The anxiety aroused by the fear of a low grade is but the obverse side of the motivational coin. If the grade is to have a motivational function, then a high grade must be an ever-present but never guaranteed outcome; the corollary is that a low grade must be an ever-present but avoidable outcome. If the possibility of a low grade creates anxiety in the student, he reduces it by trying to learn that which will avoid the low grade. That is one way in which the motivational function is served,

¹⁴Howard S. Becker, Blanche Geer, and Everett C. Hughes, Making the Grade: The Academic Side of College Life (Wiley, 1968), passim.

¹⁵Interestingly enough, though, several studies of pass-fail grading have shown that it does not substantially alter students' course elections. See, for example, Feldmesser, op. cit., pp. 52-55.

and the evidence is that it works, when the anxiety comes in moderate amounts.¹⁶

Anxiety interferes with learning only when it becomes excessive,¹⁷ and--neurotic personalities aside--that happens when too much importance is given to a single grade. There are several ways of preventing it. First, as I have suggested previously, a student ought to be allowed to weight his grades differentially, so that he can give low weight to grades in those courses which arouse the most anxiety in him. Second, he should be helped to understand that a grade is not a judgment of his moral worth, but merely an informational statement, and a fallible one at that;¹⁸ I shall propose a method for doing that below. Thirdly, there should be strict limitations on the use of a student's grade record. While it must be available to the college authorities, for reasons I have stated, they should adopt explicit restrictions on the uses to which they will put it. It should not be a basis for the determination of financial aid, or of the privilege of participating in extra-curricular activities. Certainly it ought never to have been given to draft boards without the student's permission. Indeed, beyond its use by the college itself--for

¹⁶Norman E. Wallen and Robert M. W. Travers, "Analysis and Investigation of Teaching Methods," in N. L. Gage, ed., Handbook of Research in Teaching (Rand McNally, 1963), p. 496.

¹⁷Ibid.

¹⁸One way of conveying that message is to call the lowest grade in any grading system an "incomplete" instead of a "failure." This may not "fool" anybody, but it does express the idea that the grade is a tentative evaluation, that the later development of a talent is always an open possibility.

example, in admitting students to honor sections or in dismissing them for unsatisfactory academic work, which of course would not depend on a single grade in any case--the grade record should be regarded as the property of the student alone, so that he can prevent its use in those ways that he may regard as particularly threatening.¹⁹ A different sort of problem is presented by the student who receives many low grades, which, it is said, not only deters him from further academic work of any kind but also may injure his self-esteem. Assuming that these grades are valid evaluations, discouraging the student from further academic work may, again, be the best thing for him, though it is doubly important to assure him that one can be a worthy human being without a bachelor's degree. If his self-esteem is nevertheless injured, that is surely a result chiefly of the negative evaluations themselves; it is doubtful that reporting them as grades adds much to the damage. But if one believes (as I happen to believe) that every individual has the capacity for success in some subject, even at the college level, then it follows that the wrong lies not in the concept of grading but either in poor teaching, which failed to develop any capacity, or in invalid evaluations, which failed to register successful performance when it occurred.

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This would not defeat the reporting function. Besides the use of the grade record by the college, graduate schools and employers may also want to see it; they should be required to obtain it through the student, and he should have the right of refusal, but he will be quite aware of the significance that will be attached to his exercise of his right. If he does give his permission for the record to be sent outside the institution, the "authority" of the college becomes simply the capacity to certify that the grade record is accurate.

In the end, it is their lack of validity that remains as the most justified criticism of grades. Whatever valuable functions they could perform in the abstract, they will not perform them if they are not valid measures of learning; and all too often, they are not. It is lack of validity which is being alluded to when it is charged that grades displace learning as the goal of study; that grades tend to reward memorization and other low-level academic skills rather than understanding and creativity; that grades make the student a slave to his instructor, fearful of offending him or disagreeing with him. For if understanding, originality, initiative, and rational skepticism of authority are among the proper objectives of education--as I trust we all agree they should be--then grades that fail to reflect these qualities are not valid grades, by the very definition of "validity."²⁰ And of course the same is true of all educational evaluations, of which recorded grades are but a final distillation.

But this is a remediable deficiency. Valid educational evaluations are difficult to arrive at, but not impossible; at the very least, they can be far more closely approached than they are at present. The main reason why we are now so remote from them seems pretty obvious: The overwhelming majority of college faculty members have had no training whatsoever in making them. Evaluations of academic performance, including grades, are being made by instructors who, by commonplace observation,

²⁰Cf. Ebel, op. cit., pp. 400-401.

have not formulated their teaching objectives in any precise or deliberate way; who do not understand, and may not even have thought about, the relationships of objectives to the manner in which they conduct their classes, the assignments they make, or the examination questions they ask; and who have never learned anything about the techniques of measuring the attainment of educational goals.²¹

Ultimately, this kind of training ought to be the responsibility of the graduate schools which produce our college teachers. Meanwhile, each college could well undertake to fill in the gap itself. It could, for one thing, publish a clear and coherent statement about grading policies and practices; faculty and students should naturally participate in drawing it up, which would be an educational experience in itself. For another and more important thing, a college could conduct a seminar on evaluation at the opening of each academic year, with attendance expected for all faculty members in their first year and perhaps every third or fourth year thereafter, to keep them up to date on theories and technologies. It would be highly desirable if students were to attend this seminar, too. Exposure to the mundane procedures involved in evaluation would help students appreciate the fallibility of the instruments and would tend to divest grades of their moral overtones, thus reducing the anxiety associated with them.

²¹"The ordinary college teacher, giving out grades in the ordinary way on the basis of a few special papers or tests and a single final examination, is a fountain of error, and everyone knows it except the man himself." McGeorge Bundy, "An Atmosphere to Breathe: Woodrow Wilson and the Life of the American University College" (Woodrow Wilson Foundation, 1959), p. 19. See also Becker, Geer, and Hughes, op. cit., p. 140.

Furthermore, knowledge on the part of faculty members that their students were moderately sophisticated in the matter would be an efficacious way of enforcing good grading practices. Such steps would go a long way toward overcoming the evil that grades can do, allowing us to take full advantage of their positive functions.